Northern Great Plains Network

Inventory and Monitoring Monthly Report

October 2005

Budget: The September newsletter informed everyone that we will NOT be getting full funding in FY06 as scheduled (actually, our full funding was originally scheduled for FY05). Although we will not be getting full funding, we have recently been told that we "may" get a $150k bump up from our FY05 level, for a FY06 budget of $456k. However, the $150k is comprised of soft dollars and should be used with that in mind. The Technical Committee will meet in the near future to decide how to proceed.

Water Quality Monitoring: On October 28 the I&M Coordinator met with Dr. Nels Troelstrup and Jill Rust of South Dakota State University to discuss progress on the water quality planning project. The analysis of the biological data collected from the parks in 2004-05 is almost complete. The analysis identified the top 10 "groups" of aquatic macroinvertebrates that may serve as the best indicators of ecosystem change in each of the 4 major water bodies (Large Rivers, Small-Medium Streams, Springs, Stock Ponds). For example, the list for Small-Medium Rivers is:

- Sprawler Richness
- Percent Ephemeroptera, Plecoptera & Trichoptera Richness
- Percent Collector-gatherers
- Number of Taxa Tolerant to Organic Pollution
- Percent Contribution of Dominant Taxon to Total Abundance
- Shannon-Wiener Diversity
- Insect Richness
- Shredder Richness
- Percent Sprawler Richness
- Modified Hilsenhoff Biotic Index

In practice water quality monitoring will likely sample all types of aquatic macro-invertebrates (as long as you're scooping and sorting you may as well collect data on everything), but the groups listed above are those that should be the best indicators of ecosystem change. In a perfect world we would compare the status of these groups to pristine or "reference" sites, unfortunately, we are about 150 years too late for that. Indeed, the parks are in many cases the closest thing to a pristine site. In other words, data collected on the groups above will show changes over time within the park, but they will not quantitatively show where the park is in regards to natural conditions (that's where best professional judgment comes in). The discriminatory analysis that identified the groups is somewhat unprecedented in the Northern Great Plains so it should be of benefit to partner agencies as well. Of course our water quality sampling will also collect information on abiotic features as well (e.g., temperature, pH, substrate).

Mount Rushmore Old Growth Study: I&M Program resources contributed to a recently-completed vegetation study at Mount Rushmore NMEM. The study helped develop the park's plant list. The study also quantitatively documented the amount of old growth at

the park. Dr. Amy Symstad of USGS-BRD and Mike Bynum of the I&M Program found that 71% of the park is in old growth condition. Furthermore, the park is one of the last best examples of old growth in the entire Black Hills. Many of the large trees within the park germinated before the signing of the Declaration of Independence and some of the oldest were seedlings about the time of Columbus' landing in North America.

Network Organizational Changes: Effective October 1, Andy Banta is now the I&M Board Chairperson (replacing the superintendent from Agate Fossil Beds NM) and Paul Hedren is the newest member. Linda Stoll is the third Board Member. (The Network I&M Coordinator and the Regional I&M Coordinator are non-voting Board Members.) Also effective October 1, the Network I&M Coordinator is now supervised by the Regional I&M Coordinator.